

**REMARKS**

Claims 1-4, 6-7, 9-15, and 17-22 are pending in this application. By this Amendment, claims 5 and 16 have been canceled without prejudice or disclaimer, and claims 1, 3, 12, and 14 have been amended. Reconsideration based on the above amendments and the following remarks is respectfully requested.

**I. The Claims Define Allowable Subject Matter**

The Office Action rejects claims 1-4, 6, 7, 10, 12-15, 17-19, and 21 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,054,992 to Gibson in view of U.S. Patent 6,512,516 to Schill. This rejection is respectfully traversed.

As conceded in the Office Action, Gibson and Schill, taken separately or in combination, do not disclose teach or suggest, "wherein the state change propagation means determines at random whether or not a state of an elemental object is changed when a state of another elemental object which has a predetermined relationship with the elemental object and belongs to the same aggregate object as the elemental object has changed," as recited in independent claims 1, 3, 12, and 14.

For at least these reasons, it is respectfully submitted that independent claims 1, 3, 12, and 14 are distinguishable over the applied art. The remainder of the claims that depend from independent claims 1, 3, 12, and 14 are likewise distinguishable over the applied art for at least the reasons discussed above, as well as for the additional features they recite.

The Office Action rejects claims 5, 11, 16, and 22 under 35 U.S.C. §103(a) as unpatentable over Gibson in view of Schill and further in view of Mazarak et al., "Animating Exploding Objects" ("Mazarak"). This rejection is respectfully traversed.

Gibson, Schill, and Mazarak, taken separately or in combination, do not disclose, teach or suggest, "wherein the state change propagation means determines at random whether or not a state of an elemental object is changed when a state of another elemental object

which has a predetermined relationship with the elemental object and belongs to the same aggregate object as the elemental object has changed," as recited in independent claims 1, 3, 12, and 14.

Mazarak discloses a physically-based modeling of a blast wave on surrounding objects using a fracture algorithm capable of accounting for the damage of multiple explosions. Mazarak discloses simulating the fracture of an object by breaking links in the structure of the object. A link is broken when the pressure from the blast on the link exceeds the link's yield limit. Each link's yield limit is determined by a random variable. Although the yield limits of the links are determined randomly, the breakage of the links is not random. The breakage of the links is dependent upon whether the force of the blast applies enough pressure to break links in the structure. Even if one link is weaker than another link, it does not mean that the weaker link will be broken by the blast force. The direction of the blast force on a weaker link may still not be strong enough to break the link.

Accordingly, Mazarak does not disclose, teach, or suggest "wherein the state change propagation means determines at random whether or not a state of an elemental object is changed when a state of another elemental object which has a predetermined relationship with the elemental object and belongs to the same aggregate object as the elemental object has changed," as recited in claims 1, 3, 12, and 14. Therefore, withdrawal of this rejection is respectfully requested.

The Office Action rejects claims 9 and 20 under 35 U.S.C. §103(a) as unpatentable over Gibson in view of Schill and further in view U.S. Patent No. 5,261,041 to Susman. This rejection is respectfully traversed.

Gibson, Schill, and Susman taken separately or in combination, do not disclose teach or suggest, "wherein the state change propagation means determines at random whether or not a state of an elemental object is changed when a state of another elemental object which

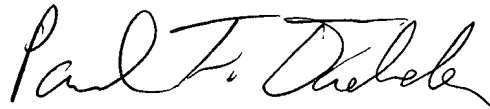
has a predetermined relationship with the elemental object and belongs to the same aggregate object as the elemental object has changed," as recited in independent claims 1, 3, 12, and 14. Therefore, withdrawal of the rejection of claims 9 and 20, which depend from claims 1 and 12 respectively is respectfully requested.

## **II. Conclusion**

For at least these reasons, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-4, 6-7, 9-15, and 17-22 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number set forth below.

Respectfully submitted,



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